

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A process for the separation of nickel, cobalt or both from impurity elements selected from one or more of calcium, magnesium, manganese and chloride contained in a leach solution, the process comprising the step of contacting the leach solution ~~to~~ with a solvent extraction solution comprising a carboxylic acid, ~~an~~ a chelating aliphatic hydroxyoxime and a kinetic accelerator, wherein the solvent extraction step effects extraction of nickel, cobalt, or both into an organic phase, to the extent that these elements are present, with calcium, magnesium, manganese, and chloride being rejected to the aqueous phase.
2. (Previously Presented) The process of claim 1, wherein the solvent extraction step comprises contacting the leach solution with an organic solution comprising the carboxylic acid, the aliphatic hydroxyoxime and the kinetic accelerator.
3. (Previously Presented) The process of claim 2, wherein cobalt poisoning as a result of oxidation of cobalt(II) to cobalt(III) is avoided.
4. (Previously Presented) The process of claim 2, wherein all of an organic phase separated from the solvent extraction step is subjected to stripping with an acid solution to strip metals present from the organic phase.
5. (Previously Presented) The process of claim 4, wherein the stripping step is preceded by a scrubbing step.
6. (Previously Presented) The process of claim 4, wherein the stripping step is a selective stripping step.

7. (Previously Presented) The process of claim 2, wherein the organic solution displays fast extraction kinetics for nickel, cobalt, copper, zinc and manganese.
8. (Previously Presented) The process of claim 2, wherein the organic solution is in contact with the leach solution for a period of 5 minutes or less.
9. (Previously Presented) The process of claim 8 wherein the organic solution is in contact with the leach solution for a period of 3 minutes or less.
10. (Previously Presented) The process of claim 8 wherein the organic solution is in contact with the leach solution for a period of 2 minutes or less.
11. (Previously Presented) The process of claim 2, wherein the organic solution comprises a stabilizer against hydroxyoxime degradation.
12. (Previously Presented) The process of claim 11, wherein the stabilizer reduces oxidation and/or hydrolysis of the hydroxyoxime.
13. (Previously Presented) The process of claim 12, wherein the stabilizer is an anti-oxidant.
14. (Previously Presented) The process of claim 1, wherein the solvent extraction step effects extraction of a large proportion of the nickel, cobalt, copper and zinc into an organic phase, to the extent that these elements are present, with a large proportion of the calcium, magnesium, manganese and chloride being rejected to the aqueous phase.
15. (Previously Presented) The process of claim 1, wherein the leach solution contains impurity elements selected from one or more of calcium, magnesium, manganese and chloride, optionally together with copper and/or zinc.

16. (Previously Presented) The process of claim 1, wherein the leach solution is a solution that has been subjected to a preliminary iron and/or aluminium precipitation step to precipitate out iron and/or aluminium to leave an aqueous leach solution containing the target elements and impurity elements other than iron and aluminium.

17. (Previously Presented) The process of claim 1, wherein the carboxylic acid is 2-methyl, 2-ethyl heptanoic acid or a cationic exchange extractant having extraction characteristics similar to 2-methyl, 2-ethyl heptanoic acid.

18. (Previously Presented) The process of claim 1, wherein the hydroxyoxime is a chelating α -hydroxyoxime.

19. (Previously Presented) The process of claim 1, wherein the kinetic accelerator increases the rate of extraction and/or stripping kinetics of nickel.

20. (Previously Presented) The process of claim 1, wherein the pH of the aqueous phase in the solvent extraction step is maintained in the range of from 5.0 to 6.5 to effect extraction of the cobalt and/or nickel into the organic phase.

21. (Previously Presented) The process of claim 20, wherein the pH of the aqueous phase in the solvent extraction step is maintained in the range of from 5.5 to 6.0.

22. (Previously Presented) The process of claim 21, wherein the organic phase from the solvent extraction step is subjected to scrubbing.

23. (Previously Presented) The process of claim 1, wherein cobalt and nickel are extracted into the organic phase, and the organic phase is subjected to selective stripping to separate to a significant extent the cobalt from the nickel.

24. (Previously Presented) The process of claim 23, wherein the selective stripping comprises contacting the organic phase from the solvent extraction with an acidic aqueous solution to yield (a) a loaded strip liquor containing cobalt, and (b) a selectively stripped organic solution containing nickel.

25. (Previously Presented) The process of claim 24, wherein the acidic aqueous solution used in the selective stripping has a pH in the range of 3.0 to 4.0.

26. (Previously Presented) The process of claim 23, wherein the cobalt is recovered from the loaded strip liquor.

27. (Previously Presented) The process of claim 26, wherein the cobalt is recovered by cobalt precipitation.

28. (Previously Presented) The process of claim 23, wherein the nickel is recovered from the stripped organic solution from the selective stripping step.

29. (Previously Presented) The process of claim 28, wherein the organic solution from the selective stripping step contains nickel and copper, and is subjected to stripping with an aqueous acid solution to separate the nickel into the aqueous phase with only a small amount of the copper, followed by ion exchange to remove the copper, and the nickel is recovered from an eluate of the ion exchange.

30. (Previously Presented) The process of claim 22, wherein the scrubbed organic solution is stripped to obtain (a) a loaded strip liquor containing nickel and cobalt, and copper and zinc to

the extent that copper and zinc are present, and (b) a stripped organic solution.

31. (Previously Presented) The process of claim 30, wherein the loaded strip liquor is subjected to organophosphinic acid solvent extraction.

32. (Previously Presented) The process of claim 31, wherein the organophosphinic acid solvent extraction produces (a) a loaded organic solution which contains cobalt and (b) an aqueous raffinate containing nickel.

33. (Previously Presented) The process of claim 32, wherein the loaded organic solution from the organophosphinic acid extraction is scrubbed, the scrubbed organic solution containing cobalt is subjected to stripping with sulphuric acid at an appropriate pH, the loaded strip liquor containing cobalt is subjected to ion exchange to remove copper and zinc present, and cobalt recovered from the eluate.

34. (Previously Presented) The process of claim 33, wherein nickel is recovered from the aqueous raffinate from the organophosphinic acid extraction.

35. (Previously Presented) The process of claim 1, wherein scrubbing is conducted on the organic phase after each solvent extraction.

36. (Previously Presented) A product recovered by the process according to claim 1.